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USAF review(s) completed.

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DIA review(s) completed.

State Dept. review completed

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

S-0063/DI

13 MAY 1971

SUBJECT: CIA Intelligence Memorandum "The Impact of Logistic Factors on NVA Offensive Capabilities During 1971" (S)

TO: Director
Central Intelligence Agency
Washington, D.C. 20505

1. The subject document was delivered to the Pentagon late in the day preceding the WSAG meeting at which it was scheduled to be discussed. Since it would be necessary for me to review the document that night and for my people to prepare comments for me and for the Chairman for use the next day, copies had to be made. DIA had prepared a similar analysis, also dated 25 March, which was similarly treated. A copy was forwarded to CIA in order that we would all be fully informed preparatory to the meeting on the following day.

2. Because of the requirement for DIA to participate directly in the series of studies that preceded and followed the subject CIA analysis, I had brought two intelligence/logistic personnel into DIA from CINCPAC. These personnel completed their temporary duty with DIA on 26 March and returned to Hawaii. Anticipating that their services might be again required, and therefore that they should be kept fully informed, one copy of the DIA study, one copy of the CIA study, and one copy of the DIA comments on the CIA analysis were forwarded to CINCPAC on 30 March through established and secure channels.

3. The J-2 CINCPAC has advised that no copies have been made and that the study has been properly controlled by his office.

4. I have determined to my satisfaction that no additional similar dissemination has been made. I do indeed share your concern in this matter and appreciate the need of ensuring that the practice be stopped. I have issued instructions to that end. However, in dealing with materials in which time available for staffing is a factor it would be helpful if a few additional copies were made available thus obviating the need for unauthorized duplication.

D. V. BENNETT
Lieutenant General, USA
Director

1971

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74-2332

4 MAY 1971

MEMORANDUM FOR: Lt. General Donald V. Bennett
Director
Defense Intelligence Agency

SUBJECT : CIA Intelligence Memorandum "The Impact of Logistic Factors on NVA Offensive Capabilities During 1971", [redacted] March 1971

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1. You will recall that subject memorandum was prepared by this Agency at the request of Dr. Kissinger and discussed at a meeting of the Washington Special Action Group on 26 March 1971. Due both to the circumstances under which the memorandum was prepared and Dr. Kissinger's great concern about unauthorized and widespread dissemination of documents dealing with highly sensitive subjects, the dissemination of our report was highly restricted. In addition to the copies disseminated to Dr. Kissinger and selected members of his staff, I restricted dissemination of the memorandum to Secretary Laird, Deputy Secretary Packard, Admiral Moorer, Deputy Assistant Secretary Doolin, and U. Alexis Johnson.

2. It has come to my attention that a xerox copy of the memorandum has been made available to CINCPAC. I view this development with great concern and am also apprehensive that this practice of reproducing highly restricted documents may mean that the memorandum has received even wider dissemination. I would appreciate it if you would look into this

SECRET

matter to determine how the document was transmitted to CINCPAC and if any additional dissemination was made in the same manner.

3. I am sure you share my concern and appreciate the need of ensuring that the practice be stopped.

Richard Helms

Richard Helms
Director

CONCUR:

ILLEGIB

Acting Deputy Director for Intelligence — Date

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25 MAR 1971

Admiral Thomas H. Moorer

Attached is an analysis of logistic activities in South Laos, including estimates of the probable throughput of supplies during the current dry season.

Richard Helms

Attachment:

25X1

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OD/OER (25 Mar 71)

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Deputy Secretary Packard, Defense
U Alexis Johnson, State
Dr. Henry Kissinger, White House
~~General Vogt, Defense~~
~~General Bennett, Defense~~
~~Ray Cline, State~~

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25 March 1971

MEMORANDUM FOR: Dr. K. Wayne Smith
Director
Program Analysis Staff
National Security Council Staff

SUBJECT : Transmittal of Report

1. Attached are two copies of our analysis of the logistic activities in South Laos including estimates of the probable throughput of supplies during the current dry season.

2. Mr. Helms has made single copy dissemination to Kissinger, Moorer, Deputy Secretary Packard and U. Alexis Johnson. He authorized me to disseminate two copies for the NSC Staff but had denied any additional dissemination at this time.

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Deputy Director
Economic Research

Attachments: (2)

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Copies 11 & 12.

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25X1 OD/OER: (25 Mar 71)

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Copy No. 3

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MEMORANDUM FOR: DDI

Attached is a copy of the logistic report prepared for tomorrow's WSAG meeting. Mr. Helms authorized dissemination only to Moorer, Packard, Alexis Johnson and Kissinger plus 2 copies for Dr. K. Wayne Smith (NSC Staff)

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Deputy Director
Economic Research

Attachment:

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25/3/71
(DATE)

FORM NO. 1 AUG 54 101 REPLACES FORM 10-101 WHICH MAY BE USED. (47)

MEMORANDUM FOR: George Carver

External dissemination to the attached limited to Packard, Moorer, U. Alexis Johnson, Kissinger plus 2 copies to K. Wayne Smith (NSC)

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Deputy Director
Economic Research

Attachment:

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25 Mar 71
(DATE)

FORM NO. 1 AUG 54 101 REPLACES FORM 10-101 WHICH MAY BE USED. (47)

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Secret

DIRECTORATE OF
INTELLIGENCE

Intelligence Memorandum

The Impact of Logistic Factors on NVA Offensive Capabilities During 1971

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Secret

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March 1971

Copy No. 7

CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
25 March 1971

INTELLIGENCE MEMORANDUM

The Impact of Logistic Factors on NVA Offensive Capabilities During 1971

The Problem

This memorandum has two purposes. First, it assesses the performance of the NVA logistic system in the Panhandle of Laos in order to estimate the volume of supplies which the North Vietnamese will have moved into South Vietnam and Cambodia during the current dry season. Second, it relates the estimated throughput of supplies to the logistic requirements of enemy forces in order to determine what levels of offensive activity these forces will be able to sustain during 1971.

The memorandum focuses primarily on logistic factors such as the total volume of supplies which must be moved to maintain the system, to compensate for supply losses, and to satisfy consumers in South Laos, South Vietnam and Cambodia. To provide better perspective on the possible strategic choices available to Hanoi during 1971, the memorandum also considers such factors as Hanoi's own views, as we understand them, on the military course it will pursue over the next year. It does not give any detailed consideration of manpower constraints which are a vital factor in the choice of options available to North Vietnam. The estimates presented in this memorandum on the input and throughput of supplies are necessarily tentative since the dry season still has four to eight weeks to go. As the season is concluded these estimates may be revised substantially.

I. The View from Hanoi -- Pre-Lam Son 719

1. At the outset of the 1970-71 dry season, it was our belief that Hanoi would not soon be ready to depart significantly from the relatively low-profile military course adopted in South Vietnam some two years earlier. We did not expect a major increase in the level of North Vietnamese military activities because in most of South Vietnam their capabilities appeared inadequate to the task. In the northernmost provinces and the high plateaux, we perceived a possibility that the North Vietnamese might bring more main force strength into play, but the evidence appeared to rule out any major offensive action.

2. Moreover, in the wake of Sihanouk's ouster, the Vietnamese Communists appeared to have their hands full simply maintaining their existing military position. Priority had to be accorded to rebuilding, restocking, and assuring the security of the supply lines and logistic bases stretching from southern North Vietnam through Laos and Cambodia to the borders of South Vietnam -- a large order requiring substantial time, effort, and manpower. And -- an additional burden -- for the first time in years, Hanoi felt compelled to raise its guard at home against the possibility of renewed US air attacks, and ground raids as well. One other consideration weighed heavily in our reasoning: Hanoi's probable calculation that major Communist attacks in South Vietnam might discourage further American troop withdrawals, or at least slow the pace over the remainder of 1971.

3. Thus, at the turn of the year, we foresaw six to nine months more of Communist effort focussed on reconstituting and securing the routeways to South Vietnam. We did not exclude the possibility that the substantial Communist troop reinforcement in the supply corridors could be turned against South Vietnam's northern provinces. But we thought it an unlikely move in view of Hanoi's obvious concern over the vulnerability of its lifelines. And while it appeared likely that Communist forces in Laos and Cambodia would step up their military activities during the 1970-71 dry season, we did not anticipate any all-out North Vietnamese drive in either country this year.

II. The Logistic System

4. The Communist logistic system in southern Laos has functioned effectively throughout the war in supporting enemy forces in northern South Vietnam. The system has expanded significantly since 1959 [redacted] 25X1

[redacted] The system moves supplies chiefly by truck, supplemented by two petroleum pipelines, various waterways, oxcarts, bicycles, and thousands of human porter. Its 1,900 miles of roads extend from Mu Gia Pass 300 miles south to the tri-border area (see the map). Over the years the Communists have modified and expanded the system to mitigate the effects of inclement weather and US bombing.

5. The redundancy of the system gives it great flexibility. Besides the Mu Gia Pass, there are two other entry corridors from North Vietnam -- the Ban Karai Pass, and Ban Raving Pass near the western DMZ -- through which supplies are funneled into southern Laos. From these entry points a vast myriad of roads and bypasses lead south into the Tchepone area. Although the system south of Tchepone is less dense, it too is highly redundant. Supplies moving on the main north-south artery are shunted onto various exit roads eastward into South Vietnam and southwestward into Cambodia. The southward movements of supplies by truck is also complemented by the use of waterways -- chiefly the Se Bang Hieng from the western DMZ through the Tchepone area and the Se Kong from Ban Bac southwestward 145 miles into Cambodia -- and the two pipelines.

6. There are three phases to the flow cycle through the Panhandle. In late September or October, as the roads dry out, workers begin readying the system for the dry season. About a month later a heavier input of supplies starts through the passes to replenish stocks drawn down in the wet season. This phase generally continues through the end of December. Following this restocking phase, the logistical "General Offensive" aimed

at pushing supplies through the system and into South Vietnam and Cambodia begins. During the current dry season the offensive began on 4 January; last dry season the logistics offensive was scheduled to end in late April but was extended through late May because of the Allied incursions into Cambodia. Given the disruptive effects of Lam Son 719 we assume in this memorandum that the NVA will again continue to move supplies well into May.

7. Throughout the war the Communists have steadily increased their use of the Ho Chi Minh Trail system. With each year the level of supply activity has increased significantly. 25X1

8. The logistic system in Laos acquired a new and critical significance in the spring of 1970 when North Vietnam was denied access to the port of Sihanoukville and its Cambodia base areas were overrun by Allied forces. 25X1

With the loss of the Cambodian route, Hanoi was for all practical purposes left with a single lifeline to support its military forces throughout South Vietnam and Cambodia.* The new burdens placed on the Laos system were also aggravated by the fact that the system in Laos was itself requiring an ever increasing amount of logistic support.

* *Although some supplies move across the DMZ into MR 1 and there is some evidence that supplies are infiltrated by sea into MR 4, the amounts are believed to be small in relation to the volumes moved through Laos.*

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III. The 1970-71 Logistic Burden

9. Immediately upon the Allied incursions into Cambodia, Hanoi reacted vigorously to ensure the integrity and viability of its supply system. Fearful that the Allied incursions would extend into southern Laos, and mindful of the new burdens this system must handle, the North Vietnamese took two significant steps. First, in order to have the system ready to go at the earliest opportunity during the 1970-71 dry season, they departed from normal practice and left the bulk of their logistic forces in southern Laos during the rainy season. Second, they began a steady and sizable expansion of the security forces in southern Laos. These developments along with the need to replace Sihanoukville meant that the logistic system in southern Laos would be required to move more tonnages than ever before during the 1970-71 dry season. The logistic burden reached even greater levels as a result of the measures taken to defend against Lam Son 719.

10. The following paragraphs provide a quantitative measure of the logistic burden which must be handled by the supply system in southern Laos. In addition to quantifying the normal flow of supplies through the system, the impact of each of the major incremental burdens is measured.

The Normal Logistic Flow

11. Prior to this dry season the flow of supplies moving into the Panhandle was intended for the Communist forces in southern Laos, as well as the forces in MR 1 and the northern part of MR 2 in South Vietnam. The forces in southern Laos prior to April 1970 are estimated to have had a daily external requirement of 100 tons a day during the dry season and 60 tons a day during the wet season. If we assume that none of these supplies were moved during the wet season, then 163 tons a day, or 39,000 tons, would have to move during the dry season.*

* *In these and all other calculations on supply flows, 25% of the requirement is added to compensate for losses from bombing.*

12. The external requirement of those forces in South Vietnam traditionally supplied via Laos amounted to an average of 32 tons a day at the 1969-70 levels of combat. Satisfaction of this requirement would involve the movement of just over 60 tons a day, or 14,600 tons, during the dry season.

13. In sum the provision of supplies to forces normally supplied via the Panhandle required a dry season movement of about 54,000 tons.

The Incremental Burdens Before Lam Son 719

14. The new burdens imposed on the Laos supply system prior to the 1970-71 dry season included the following:

-- the movement of supplies formerly delivered via Sihanoukville, and

-- the supplies required by those forces deployed to south Laos between April and October 1970 to increase the security of the logistic system.

15. The movement of supplies through Laos for NVA forces normally supplied through Cambodia -- those forces in southern MR 2 and MR 3 and 4 -- imposes a dry season logistic flow including allowances for air losses of 23-34 tons a day, or from 5,520 to 8,160 tons during the complete dry season.

16. The lower end of the range of this calculation is based on the estimated consumption of NVA/VC forces in southern South Vietnam at 1969-70 levels of combat, or about 12 tons a day. The higher end of the range is based on the assumption that supplies would be delivered this dry season at the same daily rate at which supplies were delivered to Cambodian base areas between 1966 and 1970, or about 18 tons a day. The latter calculation overstates considerably the flow which would be required since deliveries to Cambodian base areas during the period were 1.5 times greater than our estimates of current ordnance requirements for enemy forces in the area during that period.

The Augmentation of Security Forces

17. Between April and October 1970 an estimated 10,000 security troops were deployed to southern Laos to augment and improve the security of the system. We estimate that the augmentation of these forces increased supply requirements in southern Laos by some 20 tons a day. Moving of this increment into the system would require an added input during the current dry season of about 33 tons a day, or 7,900 tons during the complete season.

18. The flows required to meet these new requirements amount during this dry season to an average daily increment of 56-67 tons. For the current dry season the daily input from North Vietnam must average 280-291 tons a day compared with 224 tons a day during the past dry season (see Table 1).

Table 1

1970-71 Dry Season Supply Flows
Needed to Meet Requirements

	Supply Inputs (Short Tons)	
	Daily	Cumulative Dry Season
Pre-April 1970		
Forces in southern Laos	163	39,120
Forces in northern South Vietnam	61	14,640
Daily Input	224	53,760
Incremental Flows, 1970-71		
To replace Sihanoukville	23-34	5,520- 8,160
Pre Lam Son 719 augmentation in southern Laos	33	7,920
Daily Input	56-67	13,440-16,080
Total dry season input	*280-291*	*67,200-69,840*

The Impact of Lam Son 719

19. The previous estimates of the incremental flows that must move through southern Laos this dry season included no allowance for the total logistical impact of Operation Lam Son 719. We have estimated the impact of Operation Lam Son 719 from the logistic point of view in two ways. The first estimate is based on the estimated consumption of these forces at the very high rates of combat observed during Lam Son 719. This estimate yields an added short-term consumption of supplies directly attributable to the operation amounting to 34 tons a day. The second estimate is based on the reported volume of supplies captured or destroyed as a result of ARVN ground operation.* These losses totaled 3,650 tons or an average of about 73 tons a day during the operation. We have no way of knowing whether Hanoi's contingency planning allowed for the impact of the Lam Son Operation. If it did the total burden of the operation -- consumption and replacement of ground losses -- if spread throughout the dry season would have imposed an additional burden of 28 tons a day.

20. We do not expect the logistic impact of Lam Son 719 to be reflected in a parallel upsurge of supply inputs from North Vietnam to replace these stocks during the remainder of the dry season for the following reasons. By the time Lam Son 719 had started the North Vietnamese had finished the restocking of the logistic system in Laos.

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There is indirect evidence that this did in fact take place. We note, for example, that, despite the launching of the general logistic offensive in early January, data on the throughput of supplies into South Vietnam and Cambodia failed to show any marked upsurge by the time of Lam Son 719. The failure of throughput to increase suggests that a good part of these supplies were being diverted to stockpiles. This is reinforced by the fact that there were no

* *Although losses resulting from air attacks were undoubtedly large, there are no data available to permit any reasonable quantification of the magnitude of these losses.*

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widespread and sustained reports of enemy supply shortages during the operation. A southward movement of supplies around Tchepone was maintained throughout the operation. To the extent that supply requirements could not be satisfied from stocks, they were brought in primarily on the roads circumventing the western DMZ area. The amounts diverted from supply points in and around the Tchepone area seemed to be a relatively small share of total logistic movements during the period.

21. We would note finally that the cessation of ground losses and high combat levels means that the current added logistic burden to support enemy forces deployed to oppose Lam Son 719 is only about 15 tons a day. We assume that even this requirement is temporary and that most of the forces deployed to southern Laos in February will return to North Vietnam when the dry season ends.

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IV. 1970-71 Dry Season Performance

22. In this section we consider the performance of the NVA logistic system from two aspects -- the tonnage of supplies representing input from North Vietnam and the tonnages representing throughput into South Vietnam and Cambodia. None of the sources of data on logistic activities in Laos is completely adequate for the derivation of highly reliable and precise estimates of supply flows.

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[redacted]

Input Traffic

[redacted]

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24. Given the lack of an adequate data base for the derivation of independent estimates of supply inputs into Laos, we have attempted to quantify this flow by making adjustments to the methodologies currently used by the Seventh Air Force. To obtain a minimum estimate of input, we have used Seventh Air Force estimates made on the basis of [redacted] tonnages moved by truck into the Panhandle through 9 March. This estimate is then projected on the assumption that truck activity would continue at current levels through April and drop off substantially as the dry season came to a close during May.

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25. The maximum estimate is derived by including allowances for inputs via waterways and the petroleum pipelines. We have little hard information on the extent to which the waterways are being used. We do know that the system is

[redacted]

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being maintained in good condition and have occasional references to its use and suspect that most of its use is at night. We have assumed, therefore, that input by waterways is about half the level of last year's use, or about 10 tons a day. Our input by pipeline is based on the estimated requirement (46 tons per day) for POL in the Panhandle plus a 50% factor for stockpiling. This yields a total daily input by pipeline of 69 tons.

26. Our estimates of minimum and maximum inputs are shown in Table 2. The minimum estimate is 292 tons a day or a cumulative total of 70,000 tons for the 1970-71 dry season. The maximum estimate is 371 tons a day, or a total of about 89,000 tons.

Table 2

Estimates of Actual Input Tonnages
into Southern Laos
1970-71 Dry Season

	Short Tons	
	Daily Average	Dry Season Total
Minimum estimate		
Trucks	292	70,000
Maximum estimate		
Trucks	292	70,000
Waterway	10	2,400
Pipeline	69	16,600
Total	371	89,000

Throughput

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[redacted] On the basis of our methodology, we estimate conservatively that throughput into South Vietnam/Cambodia during the current dry season will total between 11,800 and 15,500 tons.

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V. Requirements Versus Throughput

28. At this point in the analysis we will now consider the relationship of our estimates of throughput tonnages to the logistic requirements of the enemy forces in South Vietnam and Cambodia. The estimates in this section are quantitative measures only. They do not examine the extent to which the mix of supplies entering into South Vietnam and Cambodia is compatible with the mix of goods contained in our estimates of the requirements of these forces. Our quantitative estimates of daily throughput of supplies during the current dry season and the requirements to be satisfied in South Vietnam and Cambodia show the balance to be quite tight:

	Tons per Day
Throughput	49-64
Requirements	44-50

29. These data indicate that the volume of throughput during the 1970-71 dry season will not be sufficient to enable the Communists to build up any significant volume of stockpiles. The data do support a judgment that the flow of supplies will be sufficient to maintain military activity at the low levels observed during 1970 until the next dry season starts. At the same time, it seems clear that the Communists have lost the favorable logistic posture they have long held in Indochina and that they will have to begin moving supplies very early in the next dry season in order to meet their requirements for 1971-72.

30. The above is obviously an oversimplification of the enemy's logistical position. We believe the main flow of throughput into Cambodia and South Vietnam is just beginning so that to a considerable extent the enemy so far in 1971 has been living off of stockpiles. In MR 3 and 4 these stockpiles are probably dangerously low compared with past historical levels. However,

in Cambodia the Communists stockpiles of ordnance may still be on the order of 2,500 tons.

31. The anticipated throughput into South Vietnam and Cambodia will replenish these stockpiles to some extent -- assuming a continued low level of combat -- and permit the Communists to maintain a low level of activity into the next dry season as they wait for the next dry season throughput to begin. Notwithstanding the carry-over effect of stockpiles, our analysis suggests that the Communists will have to get their logistical offensive off to an extremely early start next fall.

32. There are a number of factors that could alter to one degree or another the overall judgments given above. The enemy could, by making a major effort, continue to move supplies through southern Laos this rainy season. The throughput during these months, however, would probably be not more than 20% of our estimated throughput for the past dry season. This would, however, provide some further insurance for the North Vietnamese that they can stay in the war at 1970 levels of combat until a major resupply effort can be mounted in the fall. Furthermore, it is also possible that the Communists could successfully infiltrate some supplies by sea to meet their most critical requirements in South Vietnam, especially in the remote areas of MR 3 and 4. Market Time is still probably sufficiently effective to prevent such resupply activities on a major scale. However, even an occasional successful delivery of 100 tons of ordnance would go a long way in enabling the Communists to create the impression that they are still alive and at times even agresssive in South Vietnam.

33. In sum, the loss of the Sihanoukville supply route, the losses of important caches of war material in Cambodia and southern Laos, and now the disruption caused by Lam Son 719 have greatly complicated the enemy's logistical situation. Far from enjoying a wide range of logistical options from which to tailor future strategy options the enemy is tied during the rest of 1971 to a continuation of the low-profile war he fought in 1970. While the enemy's

logistical situation does not preclude an occasional high point of combat activity in either South Vietnam or Cambodia, major sustained warfare seems definitely to be ruled out.

VI. Hanoi's Probable Objectives and Course of Action Through 1971

34. Hanoi's already narrow range of options for 1971 will probably be further constricted in the aftermath of Lam Son 719. North Vietnam's ability to conduct large-scale military action in most parts of South Vietnam in 1971 has been undercut further by the operation. The Communists may try to keep the pressure on South Vietnamese forces that have been withdrawn from Laos, and may even attempt to raise the level of action in MR 1 temporarily to score psychological gains in the aftermath of Lam Son 719. But prudence would seem to dictate that Hanoi concentrate major efforts in moving supplies south before attempting any sustained major military action, even in the northern provinces of South Vietnam. The evidence above, however, suggests that the North Vietnamese are going to move enough supplies south this year to protract the war in South Vietnam and Cambodia into the next dry season at about the low levels that have prevailed during the past year or so.

35. Thus Communist strategy for the remainder of 1971 may only be modified slightly by the results of Lam Son 719. The Communists are likely to keep doing what they have been doing for the past two years, although they may have to lower their sights somewhat because of the effort they had to devote to thwarting the South Vietnamese thrust into Laos.

36. But interpretation of the results of Lam Son 719 and its implications for Hanoi's strategy involves more than calculating the effects on Communist manpower and material; its impact on how Vietnamese -- both North and South -- perceive the war is equally important. The operation into Laos came as no surprise to Hanoi; the Communists had been anticipating such a move for months. But until the thrust actually began the North Vietnamese were in no better position than the South Vietnamese or ourselves to predict the outcome of the fighting or the interdiction effort or to know what wider repercussions such a move might have for the struggle in Indochina. Hanoi knew the stakes were high, of course, and that an Allied operation which successfully disrupted its

dry-season supply effort, and thus crippled Communist forces to the south, would cast further doubt on long-term Vietnamese Communist prospects. In these circumstances, Hanoi would have to assume that South Vietnamese forces would make additional forays into the area this year and next and that eventually Thai forces might be brought up against the western flank of the infiltration corridor as well.

37. Similarly, even before Lam Son 719 Hanoi had become concerned that its own territory might no longer be "off limits" to Allied ground action, at least to small-scale raids. This concern led Hanoi to tighten up its domestic defenses, to summon more citizens for military and militia duties, and perhaps even to contemplate the distasteful necessity of inviting Chinese combat forces into North Vietnam.

38. But having weathered the Lam Son 719 storm, Hanoi may now feel reassured of its ability to ride out the withdrawal of US forces and to stay the course in Indochina. Communist forces were able to make the position of the South Vietnamese in Laos untenable, despite massive US air attacks and heavy North Vietnamese casualties. Hanoi may now calculate that the United States will be reluctant to become heavily engaged in future operations of this kind and that the South Vietnamese will be strongly inhibited from doing so without the US support they have enjoyed this time. At the very least, Hanoi must be more confident than before the operation that it can keep open its supply lines through the Lao Panhandle. Thus, despite the short-term problems engendered by Lam Son 719, Hanoi probably believes that the results of the operation cast doubt on South Vietnamese ability to contain the Communists as US forces are withdrawn.

39. In sum, Lam Son 719 has probably reinforced Hanoi's strategy of following a low-profile military strategy in South Vietnam over the remainder of 1971. Even through the 1971-72 dry season -- through April-May of 1972 -- the most likely strategy for Hanoi is a sustained effort to maintain essential supply lines to Cambodia and to South Vietnam (while attempting to rebuild

its forces in South Vietnam for the long-term struggle against the GVN). To the extent that Hanoi interprets the results at Tchepone as reassurance of its ability to stay the course in Indochina, continuation of a low-posture strategy will become even more likely.

40. The approach of the 1972 elections in the United States is the main factor that might cause the Communists to abandon their relatively cautious tactics in the next year or so. If Hanoi should conclude that strong Communist military action could have a substantial impact on the presidential contest and on long-term US support for an anti-Communist regime in South Vietnam, there is a good chance that it will be willing to pump in the heavy amounts of North Vietnamese manpower and materiel that such an effort would require. We do not believe that Hanoi will be in a position to alter the balance of forces in South Vietnam decisively, but the Communists may be able to raise the level of fighting significantly before the presidential election.

VII. Conclusions

41. The burden imposed on the logistic system in southern Laos has become significantly greater over the past year. Loss of the Cambodian supply routes, the augmentation of logistic and security forces in southern Laos, and recent Allied incursions in the Tchepone area have greatly complicated Hanoi's support of the war in South Vietnam and Cambodia.

42. Prior to 1970, North Vietnam was able to provide logistic support to its forces in southern Laos and South Vietnam and Cambodia by maintaining a daily flow of supplies during the dry season estimated at 224 tons a day. As a result of the developments in 1970, we now estimate that during the current dry season Hanoi will have to move a daily average of 280-290 tons of supplies to meet its logistic commitments in southern Laos, in all of South Vietnam, and in Cambodia. The execution of this task has been greatly complicated by the disruptive effects of Operation Lam Son 719, which imposed new burdens on the logistic system. Even though the effects of Operation Lam Son 719 were limited in duration, they sharply increased the consumption of supplies within Laos, accounted for the capture or destruction of large amounts of supplies, and forced the diversion, for a short time at least, of goods otherwise intended for South Vietnam and Cambodia.

43. The current dry season has four to eight weeks to go and estimates made now are highly tentative, but on the basis of the evidence that is currently available we estimate that the input of supplies from North Vietnam to Laos during this dry season will range from 70,000 to 89,000 tons. We also estimate that between 11,800 and 15,500 tons of these supplies will emerge ultimately in South Vietnam and/or Cambodia.

44. This volume of throughput -- 49 to 64 tons a day -- must satisfy daily requirements in South Vietnam and Cambodia of 44 to 50 tons a day. Even though the balance between throughput and requirements is tight, we estimate that the throughput will be adequate for the Communists to sustain military

activity at the low levels observed during 1970. More to the point, this volume of throughput will not permit the Communists to build up any significant volume of stockpiles and will make it imperative that their next logistic offensive get off to an extremely early start next dry season.

45. In sum, North Vietnam's logistic position over the past year has become greatly complicated. Far from enjoying a wide range of logistic options to support alternative strategies, Hanoi appears tied, for 1971 at least, to a continuation of the low-profile war fought in 1970. While the enemy's logistic situation does not preclude an occasional high point of combat activity in either South Vietnam or Cambodia, major sustained warfare seems definitely to be ruled out.

Appendix A

Enemy Resupply Requirements

The methodology used in deriving estimates of enemy resupply requirements is described in detail below. The factors used for the consumption of food, weapons requirements, and enemy force levels are generally agreed to throughout the intelligence community. The requirement estimates will differ, however, from those prepared by some other members of the intelligence community because of one analyst choosing different assumptions from another. Probably the only significant methodological difference would be the bomb damage assessment (BDA) factor. In this memorandum, a 25% BDA factor has been applied to the input tonnages transiting southern Laos. The military intelligence components would apply a higher BDA factor.

I. The Normal Logistic Flow

A. Panhandle Requirements

1. Dry Season, October 1969 - May 1970

Consumption 100 tons daily

(100 tons x 240 days = 24,000)

By Class of Supply: (OB = 70,000 personnel)

Class I (food) — 39 tons

70% external

0.70 x 70,000 = 49,000

49 tons per day (2 pounds per man)

minus 10 tons* satisfied from Cambodian sources

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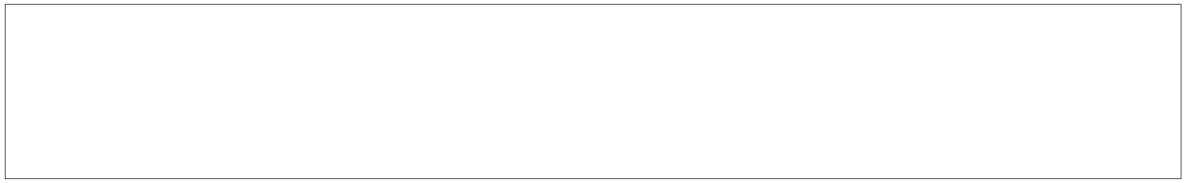

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Class II and IV (weapons/equipment)

70,000 x .30 = 21,000 pounds

21,000 ÷ 2,000 = 10.5 tons rounded to 11 tons
(0.30 pounds per man per day)

Class III (POL)

2,400 trucks; 1,200 operating daily

Consuming 10 gallons per day (3 miles per gallon; 30 miles daily)

12,000 gallons consumed daily

12,000 ÷ 328 gallons per ton 37 tons

Class V (ammunition

Number of sorties x percent sorties 13 tons

fired upon x average weight of rounds fired per incident

TOTAL 100 tons

2. Wet Season, June-September 1970

Consumption: 60 tons daily

(60 tons x 120 days = 7,200 tons)

By Class of Supply (OB = 70,000 personnel)

Class I (food) 39 tons

70% external

.70 x 70,000 = 49,000
or 49 tons per day minus

10 tons satisfied from Cambodian sources

Class II and IV (weapons/equipment)	11 tons
Class III (POL)	8 tons
Based on greatly reduced wet season truck movement	
Class V (ammunition)	2 tons
Adjusted ammunition requirement for wet season	
TOTAL	60 tons

Requirements	Total Tonnage	Short Tons Per Day
Dry season (Oct 69 - May 70)	24,000	100
Wet season (Jun 70 - Sep 70)	7,200	60
Movement in dry season only	31,200	130
Air losses (25% factor)	7,800	33
Grand Total for Dry Season Only	39,000	163

B. South Vietnam Requirements (MR 1 and Northern MR 2: Based on 1970 Consumption and Ground Losses

1. Consumption and Losses = 32 tons daily

By Class of Supply

Food	24 tons
Ammunition, weapons, and equipment	8 tons
TOTAL	32 tons

32 tons daily, 11,680 tons annually

2. Dry Season Shipments (October 1969 - May 1970)

	Daily Tonnage	Total Tonnage
32 x 365 = 11,680 ÷ 240 =	49	11,680

3. Air Losses

0.25 (25% BDA) x 49 =	12	2,920

4. Grand Totals

	Daily	Dry Season
Consumption	49	11,680
Air losses	12	2,920
TOTAL	61	14,600

II. The Incremental Burden Imposed on the Laotian Corridor

A. Input Requirement

1. Requirement for Communist Forces in Laos Prior to Lam Son 719

(1 October 1970 - 8 February 1971)

Consumption

130 days x 120 tons = 15,600 tons

By Class of Supply (OB = 80,000 personnel)

Class I Food 46 tons

(0.70 x 80,000 = 56,000 or 56 tons external minus 10 tons from Cambodia)

Class II and IV (weapons and equipment)

0.30 x 80,000 = 24,000 pounds ÷ 2,000 = 12 tons

Class III (POL)

3,000 trucks; 50% operating daily

1,500 x 10 gallons per truck

(3 miles per gallon; 30 miles daily) 15,000 ÷ 328 gallons/tons — 46 tons

Class V (ammunition)

Number of sorties x average weight of rounds fired per incident — 16 tons

TOTAL — 120 tons

2. Lam Son Requirements and Requirements for Balance of Forces in the Panhandle

Lam Son 719 (OB = 39,000 personnel)

Consumption 74 tons x 50 days = 3,700 tons

Consumption by Class

Food 39,000 x 2 pounds all NVA — 39 tons

All external

Weapons and Equipment

39,000 x .30 = 11,700
11,700 ÷ 2,000 = — 6 tons

POL

Truck inventory of 900 trucks

50% in operation daily = 450 trucks

Each consumes 10 gallons of POL

(3 miles per gallon; 30 miles daily)

450 trucks x 10 gallons = 4,500 gallons

4,500 gallons ÷ 360* gallons per ton = 12 tons

Class V (ammunition)

Level of Combat

Each major combat unit engaged in combat 1 in 5 days, or 6 times monthly, based on analysis of fighting at FSB 31, 30, LOLO, Hotel II, and the 39th Ranger Battalion engagement.

Ammunition Consumption

a. 40 infantry battalions x 4.58 tons of ammunition = 183 tons expended monthly or 6 tons daily.

b. 4 armor/artillery battalions x 7.32 tons of ammunition = 29.28 tons expended monthly or about 1 ton daily.

c. 19 AAA battalions x 16.00 tons of ammunition = 304 tons monthly or 10 tons daily.

Recapitulation of Class V

a.	40 infantry battalions	6 tons
b.	4 armor/artillery battalions	1 ton
c.	19 AAA battalions	10 tons
	TOTAL	17 tons

NOTE: The 10 tons daily consumption requirement for AAA units represents the equivalent of 61,000 12.7-mm. AA rounds or 4,800 37-mm. AA rounds.

* *Based on POL mix found in Lam Son.*

Total Lam Son Consumption	Tons
Food	39
Weapons and Equipment	6
POL	12
Ammunition	17
Total	74

Lam Son Ground Losses (73 tons x 50 days = 3,650)

Losses through 18 March projected on a daily average through 1 April

	Tons
Food	42
Weapons and Equipment	3
POL	15
Ammunition	13
Total	73

Total Lam Son requirements 147 tons

147 x 50 days = 7,350 tons

Requirement for Balance of Forces in the Panhandle

50 days x 80 tons = 4,000 tons

By Class OB = 61,000 (100,000 - 39,000 at Lam Son)

Class I (food)

0.70 x 61,000 = 43 tons 33 tons

minus 10 tons from Cambodia.

Class II and IV (weapons/equipment)

0.30 x 61,000 = 18,300 ÷ 2,000 9 tons

Class III

The balance of POL required in the Panhandle.

Total requirement 46 tons

minus Lam Son 12

Consumption 34 34 tons

Class V (ammunition) 4 tons

Total 80 tons daily

80 x 50 days = 4,000 tons dry season

Grand Totals	Tons
Lam Son	7,350
Balance of forces	4,000
Total	11,350

3. Requirement for Communist Forces in the Panhandle

1 April - 30 May 1970 8,100 tons
60 days x 135 tons =

By Class of Supply (OB = 100,000 personnel)

Class I (food) 60 tons

0.70 x 100,000 = 70 tons
minus 10 tons from Cambodia

Class II & IV (weapons/equipment)

0.30 x 100,000 = 30,000 ÷ 2,000 = 15 tons

Class III (POL) 46 tons

Class V (ammunition) 14 tons

Total 135 tons

4. Requirement for Communist Forces in the Panhandle

1 June - 30 September 1970 9,600 tons

120 days x 80 tons =

By Class of Supply (OB=90,000 personnel)

Class I (food)

0.70 x 90,000 or 63 tons 53 tons
minus 10 tons from Cambodia

Class II & IV (weapons/equipment)

0.30 x 90,000 = 27,000
27,000 ÷ 2,000 = 14 tons

Class III (POL) 10 tons

Class V (ammunition) 3 tons

Total 80 tons

5. Requirement in SVN MR 1 and Northern MR 2 for One Year

240 days x 49 tons = 11,680 tons

6. Tonnage Required to Compensate for the Loss of Sihanoukville

18 - 27 tons daily 4,380 - 6,570

Upper Range

18 tons was the average amount of supplies delivered daily to border caches between 1966 and 1970

18 tons x 365 = 6,570 tons average annually
6,570 ÷ 240 = 27 tons amount needed to be moved in the dry season.

Lower Range

Class II, IV, and V requirements in southern SVN and Cambodia equals 12 tons daily. 12 x 365 = 4,380 annual requirement. 4,380 ÷ 240 = 18 tons daily for dry season.

Recapitulation of Required Input Tonnages

	Tonnage
1. Requirements for Communist Forces in Laos prior to Lam Son	15,600
2. Lam Son Requirements and Requirements for Balance of Forces in the Panhandle	11,350
3. Requirement for Communist Forces in the Panhandle After Lam Son to end of dry season	8,100
4. Wet Season 1971 Requirement for Communist Forces in the Panhandle	9,600

5. Requirement in SVN MR 1 and northern MR 2 for one year		11,680
6. To compensate for loss of Sihanoukville	4,380 -	6,570
Total tonnage	60,710 -	62,900
with 25% BDA	75,888 -	78,625
Daily average Input	316 -	328

Throughput Requirement

1. MR 1 and northern MR 2 flow		11,680
2. Sihanoukville flow	4,380 -	6,570
TOTAL	16,060 -	18,250
Average daily throughput requirement	67 -	76

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